prodis®
Digital Process Displays

PD-ADC

Process Display for analog sensors

- **Voltage (e.g. 0 … 10 V)**
  Current(e.g. 4 … 20 mA)
  Voltage divider (Potentiometer)
- **Integrated sensor power supply**
- **6-digit LED display**
- **RS-232 interface**

prodis ®-ADC is designed for use with analog position sensors to display angles and dis-placements. A high-resolution A/D converter processes signals from sensors with voltage or current output. The meter is programmable to display values within preset start/end range or values in units as inches, mm or degrees. A tare function or programming lock can be activated with two control terminals. Sensor excitation is supplied by the meter. With four membrane keys all parameters can be programmed for the special applications. Optional comparator functions with 4 NPN open-collector output are available, additional 2 of them have relay output.

V / mA

RS-232

PD-ADC - Digital Process Display
for analog sensors

Specifications

			Order options
Display	6-digit, 7-segment LED, height 14 mm, decimal point programmable		
Counting rate	1 ... 25/s programmable		
Measurement accuracy	±0,05 % f.s.		
Excitation voltage/current	24 V DC ±10%/150 mA, residual ripple 1%SS; 85-250 V AC, 50-60 Hz/180 mA max.	1	**24VDC** **230VAC**
Sensor excitation	24 V DC/300 mA / voltage divider 5 V, 10 mA		
Input	Two channels each for: Voltage: 0 ... 10 V; 0.5 … 4.5 V, 0.5 … 10 V, max. 24V, Input resistance: 20kΩ Current: 0...20 mA, 3 wires; 4 … 20 mA 2 wires/3 wires Load 100 Ω, I_{max}<30 mA Voltage divider R_{min}=500Ω, 0 … 5 V One input or the difference between both inputs can be chosen by programming.		
Control input	2 control inputs 24 V, active low		
Comparator output (option)	Relay: 250 V AC/5 A, 30 V DC/5 A NPN: 24 V max./50 mA to GND		
Options	Comparator Desktop version	2	**REL2** **DT**
Connection	Terminal strip 12 pole, excitation 3 pole		
Temperature coefficient	±20 x 10^{-6} / °C		
Operating temperature	-10...+40 °C		
Storage temperature	-20...+85 °C		
Weight	24 V DC: approx. 250 g 230 V AC: approx. 400 g		
Protection class	Front IP60, rear IP40		
Humidity	Max. 80 % R. H., non-condensing		
Safety of equipment	Directive 2014/35/EU: EN 61010-1:2010		
EMC	Directive 2014/30/EU: EN 61326-1:2013		

Programmable parameters / value range

Value range offset	-999999 to +999999
Divisor, multiplier	0 to 999999
Other programmable parameters	Decimal point position, display brightness
Control input terminals	Key lock, display value hold, tare function

Interface RS-232

Level	RS-232: ±8 V, galvanically isolated
Data format	1 start bit, 8 data bits, 1 stop bit, no parity
Transmission rate	9600 Baud

Order code

PD-ADC – **1** – **2**

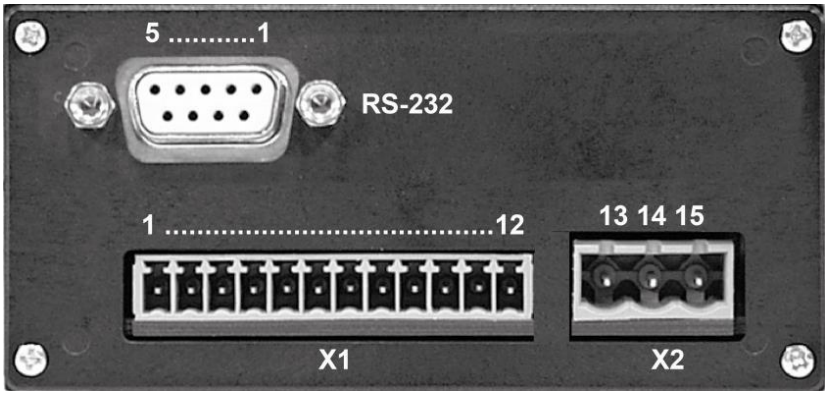
Order example: PD-ADC – 24VDC – REL2

Wiring basic unit without comparator output

Signals	Connector X1 Pin no.	Connector X2 Pin no.
Sensor excitation +UB 24 V	1	
Sensor excitation 0 V (GND)	2	
Control input terminal 1: tare function	3	
Control input terminal 2: programming lock	4	
Voltage input terminal (e.g. 0 ... 10 V), channel 1	5	
Voltage input terminal (e.g. 0 ... 10 V), channel 2	6	
Current input terminal (e.g. 0 ... 20 mA), channel 1	7	
Current input terminal (e.g. 0 ... 20 mA), channel 2	8	
Voltage divider input terminal, channel 1	9	
Voltage divider input terminal, channel 2	10	
Reference voltage 5 V for voltage divider	11	
GND	12	
PD-ADC-24VDC Excitation +24 V Excitation 0 V (GND)		 13 14
PD-ADC-230VAC Excitation Protective ground		 13, 15 14

Signals	D-Sub, pin no.
TxD	2
RxD	3
GND	5

Rear view without comparator output

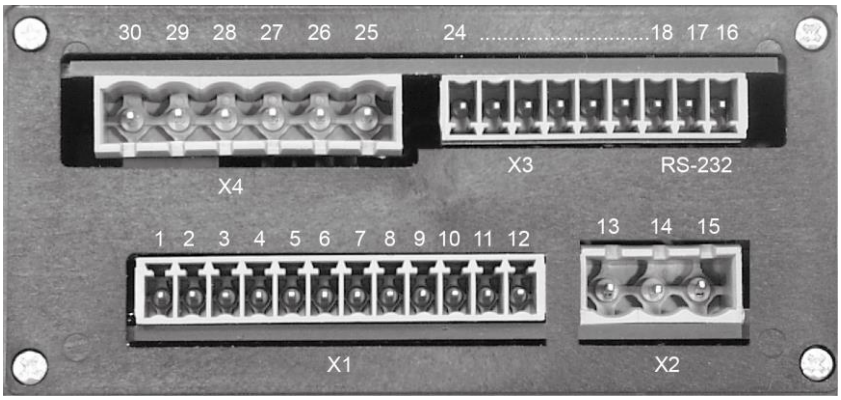


Wiring basic unit with comparator output

Signals	Connector X1 Pin no.	Connector X2 Pin no.
Sensor excitation +UB 24 V	1	
Sensor excitation 0 V (GND)	2	
Control input terminal 1: tare function	3	
Control input terminal 2: programming lock	4	
Voltage input terminal (e.g. 0 ... 10 V), channel 1	5	
Voltage input terminal (e.g. 0 ... 10 V), channel 2	6	
Current input terminal (e.g. 4 ... 20 mA), channel 1	7	
Current input terminal (e.g. 4 ... 20 mA), channel 2	8	
Voltage divider input terminal, channel 1	9	
Voltage divider input terminal, channel 2	10	
Reference voltage 5 V for voltage divider	11	
GND	12	
PD-ADC-24VDC Excitation +24 V Excitation 0 V (GND)		 13 14
PD-ADC-230VAC Excitation Protective ground		 13, 15 14

Signals	Connector X3 Pin no.
TxD	17
RxD	16
GND	18

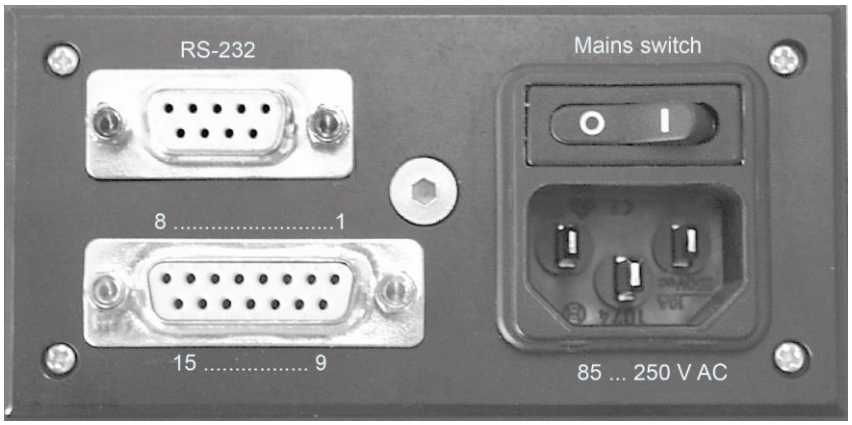
Rear view with comparator output (option „REL2“)



Comparator function (option)

Comparator	Comparator output				
	NPN collector	Connector X3 Pin no.	Relay	Connector X4 Pin no.	LED
Comparator 1	NPN1	20	Relay 1 NO NC Common	 25 27 26	LED1
Comparator 2	NPN2	21	Relay 2 NO NC Common	 28 30 29	LED2
Comparator 3	NPN3	22			
Comparator 4	NPN4	23			
	NPN GND NPN U_B (+24V)	24 19			

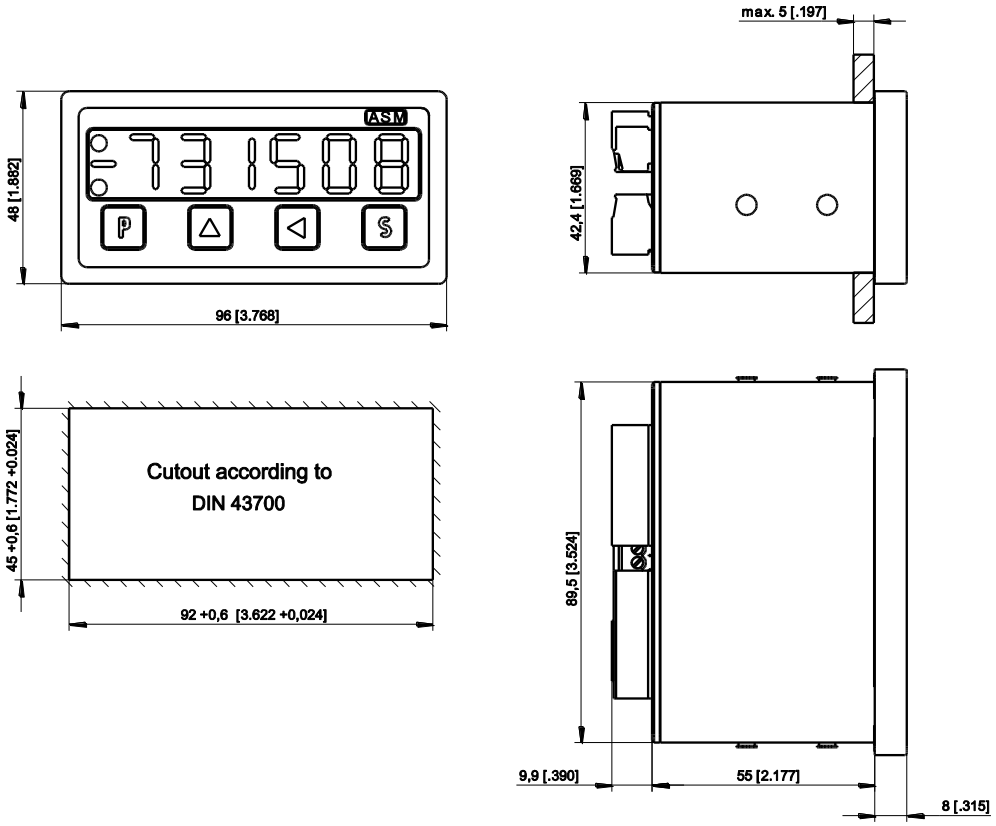
Desktop version (option „DT")



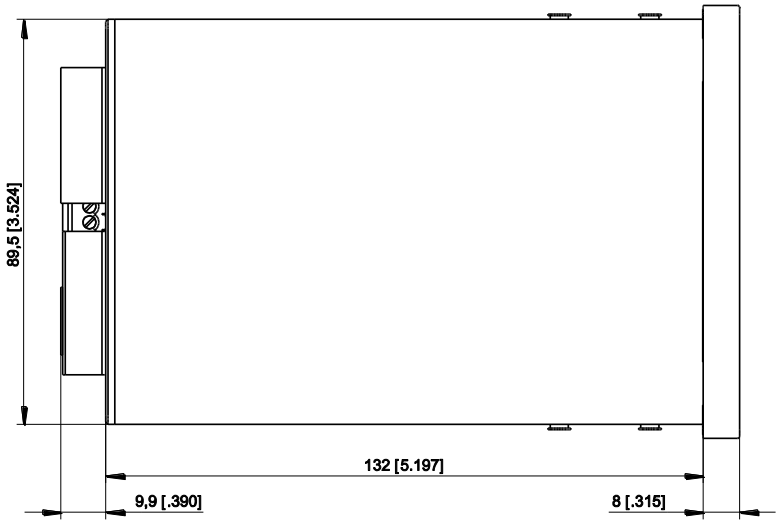
Wiring of connector X1 see table "Wiring basic unit".

Dimensions

PD-ADC-24VDC



PD-ADC-230VAC



Dimensions in mm [inch]
Dimensions informative only.
For guaranteed dimensions consult factory.